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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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Alfred D. Ducharme

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WOLF GREENFIELD & SACKS, PC  
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BOSTON, MA 02210-2206

EXAMINER

NEGRON, ISMAEL

ART UNIT

PAPER NUMBER

2875

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
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3 MONTHS

01/09/2007

PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

<b>Office Action Summary</b>	<b>Application No.</b>	<b>Applicant(s)</b>	
	10/705,643	DUCHARME ET AL.	
	<b>Examiner</b>	<b>Art Unit</b>	
	Ismael Negron	2875	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☒ Responsive to communication(s) filed on 26 June 2006.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☐ Claim(s) 1-20, 22-37, 39-64, 66-98 and 100-117 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 15-20, 22-37, 39-43, 64, 70, 78, 98, 104, 112 and 114-117 is/are allowed.
- 6) ☒ Claim(s) 1-14, 44-63, 66-69, 71-77, 79-97, 100-103, 105-111 and 113 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s).

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)                       | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)   | Paper No(s)/Mail Date. _____                                      |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>see Continuation Sheet</u> .                                  | 6) <input type="checkbox"/> Other: _____                          |

Continuation of Attachment(s), Item 3: Information Disclosure Statements filed June 26, August 7 and October 16, all of 2006

## **DETAILED ACTION**

### ***Continued Examination Under 37 CFR 1.114***

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114.

### ***Response to Amendment***

2. Applicant's amendment filed on June 26, 2006 has been entered. Claims 64, 70, 78, 98, 104 and 112 have been amended. No claim has been cancelled, or added. Claims 1-20, 22-64, 66-98 and 100-117 are still pending in this application, with claims 1, 15, 28, 36, 64, 70, 78, 80, 98, 104 and 112 being independent.

### ***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. Claims 1-4, 8, 9, 13, 44-62, 66-68, 71, 74-76, 79 and 80 are rejected under 35 U.S.C. 102(b) as being anticipated by HAVEL (U.S. Pat. 4,810,937).

4. HAVEL discloses an illumination device having:

- **a plurality of light emitting devices (as recited in Claim 1),**  
Figure 6, reference numbers 13a, 13b and 13c;
- **the plurality of light emitting devices including at least one**  
**first light emitting device configured to emit a first radiation**  
**having a first spectrum (as recited in Claim 1),** Figure 6,  
reference number 13a;
- **the plurality of light emitting devices further including at least**  
**one second light emitting device configured to emit a second**  
**radiation having a second spectrum (as recited in Claim 1),**  
Figure 6, reference number 13b;
- **the second spectrum being different from the first spectrum**  
**(as recited in Claim 1),** column 2, lines 59-61;
- **a controller (as recited in Claim 1),** as seen in Figure 4;
- **the controller being configured to control the plurality of light**  
**emitting devices to produced a composite radiation (as**  
**recited in Claim 1),** as evidenced by Figure 4;
- **the composite radiation having at least one resulting spectrum**  
**that simulates a desired spectrum corresponding to sample**

- radiation from a predetermined light source (as recited in Claim 1), inherent, as the purposed of the illumination device is to generate a desired spectrum;**
- **at least one sensor (as recited in Claim 1), Figure 6, reference numbers 36a-36c;**
  - **the at least one sensor being configured to measure at least one of the composite radiation produced by the apparatus and the sample radiation generated by the predetermined light source (as recited in Claim 1), column 6, lines 14-26;**
  - **the at least one sensor being configured to provide at least one corresponding measurement signal to the controller (as recited in Claim 1), column 6, lines 14-26;**
  - **a first quantity of the first light emitting device being selected such that if the controller supplies a predetermined electrical power to the plurality of devices the resulting spectrum substantially simulates the desired spectrum (as recited in Claim 2), inherent, as the purposed of the illumination device is to generate a desired spectrum;**
  - **a second quantity of the second light emitting device being selected such that if the controller supplies a predetermined electrical power to the plurality of devices the resulting spectrum substantially simulates de desired spectrum (as**

**recited in Claim 2), inherent, as the purposed of the illumination device is to generate a desired spectrum;**

- **a first quantity of the first light emitting device being selected such that if the controller supplies maximum electrical power to the plurality of devices the resulting spectrum substantially simulates de desired spectrum (as recited in Claim 3), inherent, as the purposed of the illumination device is to generate a desired spectrum;**
- **a second quantity of the second light emitting device being selected such that if the controller supplies maximum electrical power to the plurality of devices the resulting spectrum substantially simulates de desires spectrum (as recited in Claim 3), inherent, as the purposed of the illumination device is to generate a desired spectrum;**
- **the controller being configurable to supply selected amounts of electrical power to the plurality of light emitting devices such that the resulting spectrum substantially simulates the desired spectrum with the selected predetermined light source being at least one of an incandescent , a fluorescent or an halogen lamp (as recited in Claim 4), inherent, as the purposed of the illumination device is to generate a desired spectrum;**

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- **the plurality of light emitting devices including a plurality of light emitting diodes (as recited in claims 8, 62 and 76), Figure 6, reference numbers 13a, 13b, and 13c;**
- **an optical assembly (as recited in Claim 9), Figure 6, reference number 38;**
- **the optical assembly being for collecting the first and second radiation and projecting the composite radiation (as recited in Claim 9), column 6, lines 13-18;**
- **the predetermined light source including at least one incandescent light source (as recited in Claim 44), inherent;**
- **the predetermined light source including at least one fluorescent light source (as recited in Claim 45), inherent;**
- **the predetermined light source including at least one halogen light source (as recited in Claim 46), inherent;**
- **the predetermined light source including ambient outdoor daylight (as recited in Claim 47), inherent;**
- **the desired spectrum corresponds essentially to cloudy conditions for the ambient outdoor daylight (as recited in Claim 48), inherent, as the desired spectrum could be chosen to correspond to any spectrum;**
- **the desired spectrum corresponds essentially to sunny conditions for the ambient outdoor daylight (as recited in**



**Claim 49)**, inherent, as the desired spectrum could be chosen to correspond to any spectrum;

- **the desired spectrum corresponds one of a sunrise or sunset (as recited in Claim 50)**, inherent, as the desired spectrum could be chosen to correspond to any spectrum;
- **the predetermined light source including at least one substantially white light source (as recited in Claim 51)**, inherent, as the predetermined light source could be chosen to include any light source;
- **the predetermined light source including one or more substantially white light source (as recited in Claim 52)**, inherent, as the predetermined light source could be chosen to include any light source;
- **the sample radiation having a predetermined color temperature (as recited in Claim 53)**, inherent;
- **the controller being configure to control at least the intensity of the first and second radiation based at least in part on the predetermined color temperature (as recited in claims 54, 56 and 58)**, as evidenced by column 2, lines 56-68;
- **at least one of the first and second spectrum being selected based on the predetermined color temperature (as recited in**

- Claim 55)**, inherent, as selection of the specific type of light sources depends on the desired effect;
- **selection of the numbers of first and second light emitting devices is based at least in part on the predetermined color temperature (as recited in claims 57 and 59)**, inherent, as selection of the specific number of light sources depends on the desired effect;
  - **the plurality of light emitting devices further including at least one third light emitting device configured to emit a third radiation having a third spectrum (as recited in claims 60 and 74)**, Figure 6, reference number 13c;
  - **the second spectrum being different from the first and second spectrums (as recited in claims 60 and 74)**, column 2, lines 59-61;
  - **the plurality of light emitting devices being configure to generate up to nine different spectra of radiation which combine to produce the composite radiation (as recited in claims 61 and 75)**, column 2, lines 62-68;
  - **the controller being configured to control the plurality of light emitting devices based on the measurement signal (as recited in claims 66 and 79)**, column 2, lines 26-31;

- **the controller being configured to control the plurality of light emitting devices such that the composite radiation has substantially the predetermined color temperature (as recited in Claim 66), inherent;**
- **at least one sensor configured to measure the composite radiation (as recited in Claim 67), Figure 6, reference number 36a, 36b, and 36c;**
- **the controller being configured to control the light emitting devices to stabilize the composite radiation to have the predetermined color temperature (as recited in Claim 67), column 2, lines 26-31;**
- **the controller being configured to control the light emitting devices so as to vary at least one of the color temperature and intensity of the composite radiation (as recited in Claim 68), as evidenced by Figure 4;**
- **the controller being configured to control the plurality of light emitting devices so as to vary the color temperature of the composite radiation within a range from approximately 500 degrees Kelvin to 10,000 degrees Kelvin (as recited in Claim 69), inherent; and**
- **the controller being configured to control the light emitting devices so as to vary both the color temperature and intensity**

**of the composite radiation (as recited in Claim 71), as  
evidenced by Figure 4.**

5. The applicant is advised that the use of phrases like “configure to” fail to positively limit the structure of the claimed invention, but only requires the ability to so perform. *In re Hutchinson*, 69 USPQ 138.

In addition, the phrase “simulates a desired spectrum corresponding to sample radiation generated by a predetermined light source” has no effective patentable weight as any combination of light sources would inherently produced a composite spectrum that would correspond to at least one of all the known light sources, with such composite spectrum being predetermined by the specific combination of light sources used.

6. The applicant is even further advised that claims directed to an apparatus must be distinguished from the prior art in terms of structure rather than function. *In re Schreiber*, 44 USPQ2d 1429, 1431-32 (Fed. Cir. 1997). In this case, the claims recite substantial functional limitations, such limitations carrying little or no patentable weight, as they refer to the intended use of the claimed device without affecting its structure. The applicant is respectfully reminded that, in apparatus claims, the subject matter of the invention must be distinguished from the Prior Art in terms of structure rather than function (i.e. defining what the claimed invention is, not what it does). See MPEP § 2114.

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. Claims 5-7; 10-12, 63 and 77 rejected under 35 U.S.C. 103(a) as being unpatentable over HAVEL (U.S. Pat. 4,810,937).
8. HAVEL discloses all the limitations of the claims (as detailed in previous sections 4-7), except:
  - the quantity of first and second light emitting devices being different (as recited in Claim 5);
  - the plurality of light emitting devices including at least five different light emitting devices configure to emit radiation having five different spectra (as recited in Claim 6);
  - the plurality of light emitting devices including at least eight different light emitting devices configure to emit radiation having eight different spectra (as recited in Claim 6);
  - the resulting spectrum having a normalized deviation across the visible spectrum of less than about 25% relative to the desired spectrum (as recited in Claim 10);

- the resulting spectrum having a normalized deviation across the visible spectrum of less than about 20% relative to the desired spectrum (as recited in Claim 11);
- the resulting spectrum and the desired spectrum being within 5 db of each other across the visible spectrum when the controller supplied maximum electrical power to the light emitting devices (as recited in Claim 12); and
- the plurality of light emitting devices including at least one white light emitting diode (as recited in claims 63 and 77).

9. It would have been obvious to one of ordinary skill in the art at the time the invention was made to have different numbers of first and second light emitting devices (as recited in Claim 5), or including 5 (as recited in Claim 6), or 8 (as recited in Claim 7) light emitting devices. One would have been motivated as necessitated by the particular requirements of a specific application, as per the teachings of HAVEL. In addition, the applicant is advised that it has been held that mere duplication of essential working parts of a device involves only routine skill in the art. *St. Regis Paper Co. v. Bemis Co.*, 193 USPQ 8.

10. Regarding the resulting spectrum having a normalized deviation across the visible spectrum of less than about 25% (as recited in Claim 10) or 20% (as recited in Claim 11) relative to the desired spectrum, it would have been obvious to one of ordinary skill in the art at the time the claimed invention was made to have a normalized

deviation of 20% or less across the visible spectrum of the composite radiation from the desired spectrum, since obtaining a composite radiation spectrum as close as possible to the desired spectrum is the purpose of the patented device of HAVEL.

11. Regarding the plurality of light emitting devices including at least one white light emitting diode (as recited in claims 63 and 77), the Examiner takes Official Notice of white light emitting diodes (LED) being old and well known in the illumination art. One would have been motivated to include a white LED in the illumination device of HAVEL as necessitated by the specific spectrum requirements of a particular application.

12. Claims 72 and 73 are rejected under 35 U.S.C. 103(a) as being unpatentable over HAVEL (U.S. Pat. 4,810,937) in view of McDERMOTT et al. (U.S. Pat. 4,677,533).

13. HAVEL discloses all the limitations of the claims (as detailed in previous sections 4-7), except:

- at least one user interface (as recited in Claim 72);
- the interface being coupled to the controller and configured to facilitate control of at least one of the color temperature and the intensity of the composite radiation (as recited in Claim 72); and
- the interface and the controller being configured to facilitate simultaneous control of both the color temperature and the intensity of the composite radiation (as recited in Claim 73).

14. McDERMOTT et al. discloses an illumination device having:

- **a plurality of light emitting devices (as recited in Claim 1),**  
Figure 1, reference numbers 14 and 15;
- **the plurality of light emitting devices including at least one**  
**first light emitting device configured to emit a first radiation**  
**having a first spectrum (as recited in Claim 1),** Figure 1,  
reference number 14;
- **the plurality of light emitting devices further including at least**  
**one second light emitting device configured to emit a second**  
**radiation having a second spectrum (as recited in Claim 1),**  
Figure 1, reference number 15;
- **the second spectrum being different from the first spectrum**  
**(as recited in Claim 1),** column 3, lines 3-5;
- **a controller (as recited in Claim 1),** Figure 2, reference numbers  
25, 26 and 26A;
- **the controller being configured to control the plurality of light**  
**emitting devices to produced a composite radiation (as**  
**recited in Claim 1),** column 3, lines 33-41;
- **the composite radiation having at least one resulting spectrum**  
**that simulates a desired spectrum corresponding to a**  
**predetermined light source (as recited in Claim 1), inherent;**



- **at least one user interface (as recited in Claim 72), Figure 2, reference numbers 25, 26 and 26A;**
- **the interface being coupled to the controller and configured to facilitate control of at least one of the color temperature and the intensity of the composite radiation (as recited in Claim 72), as evidenced by Figure 2; and**
- **the interface and the controller being configured to facilitate simultaneous control of both the color temperature and the intensity of the composite radiation (as recited in Claim 73), column 3, lines 33-41.**

15. It would have been obvious to one of ordinary skill in the art at the time the claimed invention was made to include the user interface of McDERMOTT et al. in the illumination device of HAVEL to allow an user to adjust the composite radiation spectrum as desired, as per the teachings of McDERMOTT et al..

16. Method claims 81-96, 100-103, 105, and 108-110 are rejected under 35 U.S.C. 103(a) as being unpatentable over HAVEL (U.S. Pat. 4,810,937).

17. HAVEL discloses all the method claim limitations (as detailed in previous sections 3-6), except:

- the predetermined light source including at least one incandescent light source (as recited in Claim 81);
- the predetermined light source including at least one florescent light source (as recited in Claim 82);
- the predetermined light source including at least one halogen light source (as recited in Claim 83);
- the predetermined light source including ambient outdoor daylight (as recited in Claim 84);
- the desired spectrum corresponding to cloudy conditions for ambient outdoor daylight (as recited in Claim 85);
- the desired spectrum corresponding to sunny conditions for ambient outdoor daylight (as recited in Claim 86);
- the desired spectrum corresponding to one of a sunrise and a sunset (as recited in Claim 87);
- the predetermined light source including at least one substantially white light source (as recited in Claim 88);
- the predetermined light source including only one or more substantially white light source (as recited in Claim 89).

18. It would have been obvious to one of ordinary skill in the art at the time the claimed invention was made to select one of the many Prior Art light sources as the light

source spectrum to be reproduced by the patented device of HAVEL. One would have been motivated as desired for a particular situation or application, or to produce a desired effect.

19. Method claim 97 is rejected under 35 U.S.C. 103(a) as being unpatentable over HAVEL (U.S. Pat. 4,810,937).

20. HAVEL discloses all the method claim limitations (as detailed in previous sections 3-6), except the plurality of light emitting diodes (LED) including at least one white LED.

21. It would have been obvious to one of ordinary skill in the art at the time the claimed invention was made to include at least one white light emitting diode (as recited in Claim 97), since the Examiner takes Official Notice of white light emitting diodes (LED) being old and well known in the illumination art. One would have being motivated to include a white LED in the illumination device of HAVEL as necessitated by the specific spectrum requirements of a particular application.

22. Method claims 106 and 107 are rejected under 35 U.S.C. 103(a) as being unpatentable over HAVEL (U.S. Pat. 4,810,937) in view of McDERMOTT et al. (U.S. Pat. 4,677,533).

23. HAVEL individually discloses or suggests all the limitations of the claims (as detailed in previous sections 12-15), except:

- controlling at least one of the color temperature and the intensity of the composite radiation via at least one user interface (as recited in Claim 106); and
- simultaneously controlling both the color temperature and the intensity of the composite radiation via the at least one user interface (as recited in Claim 107).

24. McDERMOTT et al. discloses an illumination device having:

- **a plurality of light emitting devices (as recited in Claim 1),**  
Figure 1, reference numbers 14 and 15;
- **the plurality of light emitting devices including at least one first light emitting device configured to emit a first radiation having a first spectrum (as recited in Claim 1),** Figure 1, reference number 14;
- **the plurality of light emitting devices further including at least one second light emitting device configured to emit a second radiation having a second spectrum (as recited in Claim 1),** Figure 1, reference number 15;
- **the second spectrum being different from the first spectrum (as recited in Claim 1),** column 3, lines 3-5;

- **a controller (as recited in Claim 1), Figure 2, reference numbers 25, 26 and 26A;**
- **the controller being configured to control the plurality of light emitting devices to produced a composite radiation (as recited in Claim 1), column 3, lines 33-41;**
- **the composite radiation having at least one resulting spectrum that simulates a desired spectrum corresponding to a predetermined light source (as recited in Claim 1), inherent;**
- **at least one user interface (as recited in Claim 72), Figure 2, reference numbers 25, 26 and 26A;**
- **the interface being coupled to the controller and configured to facilitate control of at least one of the color temperature and the intensity of the composite radiation (as recited in Claim 72), as evidenced by Figure 2; and**
- **the interface and the controller being configured to facilitate simultaneous control of both the color temperature and the intensity of the composite radiation (as recited in Claim 73), column 3, lines 33-41.**

25. It would have been obvious to one of ordinary skill in the art at the time the claimed invention was made to include the user interface of McDERMOTT et al. in the illumination device of HAVEL to allow an user to adjust the composite radiation spectrum as desired, as per the teachings of McDERMOTT et al..

***Allowable Subject Matter***

26. Claims 15-20, 22-43, 64, 70, 78, 98, 104, 112 and 114-117 are allowed.

27. The following is a statement of reasons for the indication of allowable subject matter:

Applicant teaches an illumination device having plurality of groups of light-emitting devices, at least one first group of light emitting devices being for emitting a first spectrum of light and a second group being for emitting a second spectrum different from the first one. The first and second spectrums having a spectral half-width of less than about 40nm, with the peak wavelength of the first spectrum being spaced less than about 50 nm from the peak wavelength of the second spectrum (as recited in Claim 14). A controller drives each group to produce a composite spectrum, such composite spectrum simulating the spectrum of a predetermined light source. In a second embodiment, the plurality of light emitting devices includes at least two white light emitting diodes, such diodes having respectively different spectra (as recited in claims 64, 78, 98 and 112). In a third embodiment, the controller is configured to vary the color temperature of the composite radiation within a range of approximately 2,300 degrees Kelvin and 4,500 degrees Kelvin (as recited in claims 70 and 104).

1. No prior art was found teaching individually, or suggesting in combination, all of the features of the applicants' invention, specifically the first and second spectrums having a spectral half-width of less than about 40nm, with the peak wavelength of the first spectrum being spaced less than about 50 nm from the peak wavelength of the

second spectrum (as recited in Claim 14), the plurality of light emitting devices includes at least two white light emitting diodes, such diodes having respectively different spectra (as recited in claims 64, 78, 98 and 112), or the controller is configured to vary the color temperature of the composite radiation within a range of approximately 2,300 degrees Kelvin and 4,500 degrees Kelvin (as recited in claims 70 and 104), in combination with the recited structural limitations of the claimed apparatus.

### ***Response to Arguments***

28. Applicant's arguments filed June 26, 2006 have been fully considered but they are not persuasive.

29. Regarding the Examiner's rejection of Claim 1 under 35 U.S.C. 102(b) as being anticipated by HAVEL (U.S. Pat. 4,810,937), the applicant argues that the cited reference fails to disclose all the features of the claimed invention, specifically the at least one sensor being configured to measure at least one of the composite radiation produced by the apparatus and the sample radiation generated by the predetermined light source and provide at least one corresponding measurement signal to the controller. The applicant further argues that since the sensors of HAVEL are disclosed as isolated from each other and receiving only light from one of the light sources, not the composite radiation, the cited reference teaches away from the claimed invention.

30. In response to applicant's arguments that HAVEL failed to disclose at least one sensor configured to measure at least one of the composite radiation produced by the apparatus and the sample radiation generated by the predetermined light source, the applicant is respectfully advised that while the claims of issued patents are interpreted in light of the specification, prosecution history, prior art and other claims, this is not the mode of claim interpretation to be applied during examination. During examination, the claims must be interpreted as broadly as their terms reasonably allow. *In re American Academy of Science Tech Center*, 70 USPQ2d 1827 (Fed. Cir. May 13, 2004).

In this case, it is the combination of sensors 36a-36c which meet the claimed limitation, not any one of such sensors, of being configured to measure at least one of the composite radiation produced by the apparatus and the sample radiation generated by the predetermined light source.

Method claim 80 was considered as inherently disclosed by the patented structure of HAVEL, as detailed in previous sections 3-6, and explained above.

31. Regarding the Examiner's rejection of claims 2-4, 8, 9, 13, 44-62, 66-68, 71, 74-76, and 79 are rejected under 35 U.S.C. 102(b) as being anticipated by HAVEL (U.S. Pat. 4,810,937), the applicant present no arguments, except stating that such claims depend directly or indirectly from independent Claim 1 and would be allowable when/if the independent claim is allowed.



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32. Regarding the Examiner's rejection of claims 5-7, 10-12, 63 and 77 rejected under 35 U.S.C. 103(a) as being unpatentable over HAVEL (U.S. Pat. 4,810,937), or claims 72 and 73 are rejected under 35 U.S.C. 103(a) as being unpatentable over HAVEL (U.S. Pat. 4,810,937) in view of McDERMOTT et al. (U.S. Pat. 4,677,533), the applicant present no arguments, except stating that such claims depend directly or indirectly from independent Claim 1 and would be allowable when/if the independent claim is allowed.

33. Regarding the Examiner's rejection of claims 81-97, 100-103, 105 and 108-110 rejected under 35 U.S.C. 103(a) as being unpatentable over HAVEL (U.S. Pat. 4,810,937), or claims 106 and 107 are rejected under 35 U.S.C. 103(a) as being unpatentable over HAVEL (U.S. Pat. 4,810,937) in view of McDERMOTT et al. (U.S. Pat. 4,677,533), the applicant present no arguments, except stating that such claims depend directly or indirectly from independent Claim 80 and would be allowable when/if the independent claim is allowed.

### ***Conclusion***

34. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ismael Negrón whose telephone number is (571) 272-

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2376. The examiner can normally be reached on Monday-Friday from 9:00 A.M. to 6:00 P.M.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Sandra L. O'Shea, can be reached on (571) 272-2378. The facsimile machine number for the Art Group is (571) 273-8300.

35. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications maybe obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, go to <http://pair-direct.uspto.gov>. Should you have questions on access to Private PAIR system, contact the Electronic Business Center (EBC) toll-free at 866-217-9197.

  
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